

## BRITISH MEDICAL ASSOCIATION.

## SUBSCRIPTIONS FOR 1903.

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**British Medical Journal.**

SATURDAY, JANUARY 17TH, 1903.

## MR. LONG ON VACCINATION.

ON Wednesday last the President of the Local Government Board received a deputation of the Imperial Vaccination League with regard to the amendment of the Vaccination Acts. The deputation was large in numbers and most representative and influential in character. There were present not only leaders of our own profession as representing medical knowledge and belief on the subject of vaccination, but also members of the other learned professions—including, it may be mentioned, the Chief Rabbi—of the great municipalities of the country; of large commercial and industrial interests; and of public schools and colleges. To all such the subject of obligatory vaccination and revaccination is of the utmost practical importance. Not only did these interests appear directly in the deputation, but there was handed in a declaration, signed by head masters of great public schools, head mistresses of public girls' schools, heads of colleges for women, municipal authorities, large employers of labour, ship owners, ship builders, and many persons distinguished in other walks of life.

The speeches were numerous, but short and to the point; and the President of the Local Government Board was clearly impressed by them. His reply could hardly have been more satisfactory. He has evidently given much attention to the whole subject, and, quite independently of his present position as Minister of Public Health, he has come to the conclusion that vaccination and revaccination are necessary for the welfare of England so far as small-pox is concerned. In referring to what the Government may or may not do in the matter, he was careful to state that he had not yet brought the subject before his colleagues in the Ministry. His own views, however, on every division of the question, such as the efficiency of vaccination, the necessity for repetition of the operation at a proper age, the supply of pure lymph, and the unsuitability of Boards of Guardians for the administration of the Vaccination Acts are in almost entire sympathy with those submitted to him by the Imperial Vaccination League.

He wisely urged on the League the importance of extending its work beyond the effort to influence the Legislature or the Government. He pointed out how in the past at election times candidates for Parliament have been pressed by small bodies of opponents of vaccination to give pledges which would secure their votes, and that very little had been done to counteract such efforts. This is unquestionably true. Medical men who, indeed, know the truth about vaccination, do not readily condescend to enter the controversial arena with the class of people who usually constitute the local mouthpieces of antivaccination. For such work as is here in question, however, this descent is not

always necessary. The reconstitution of the British Medical Association should do much to make easy the placing of the views of the profession before members of Parliament. The system of Divisions now being instituted will lend itself to these objects. Areas so small as to contain, perhaps, only fifty medical men are likely to be within the boundaries of only one or two Parliamentary constituencies, and the members should be very conveniently able to place their views directly before their representatives or would-be representatives in the House of Commons. We heartily concur with Mr. Long's advice in this matter, and we trust that, even though the new machinery of the Association is only in process of creation, it may yet be possible to bring much influence to bear on members of Parliament in support of legislation for amendment of the Vaccination Acts in the coming session of Parliament.

The facts submitted to Mr. Long by various members of the deputation show how far-reaching are the evil influences of small-pox. Wherever epidemics come they cause enormous expenditure. The addition of threepence in the pound to the London assessment rates is the most convenient recent illustration of this. Even a single case of small-pox may practically put a great merchant ship or passenger steamer out of commission. Commerce and education, indeed, are alike interfered with, and in the matter of national efficiency Germany is here far in advance of England. For these evils obligatory revaccination as the complement of obligatory primary vaccination is the obvious remedy. It is a remedy the means of application of which are ready to hand. The school registers will supply the lists of those reaching the vaccination age, and whatever be the merits or demerits of the new Education Act it has at least this convenience that if, as Mr. Long rather indicated might be the case, the county councils are to be the new authorities for administration of the Vaccination Acts, there will be no need of application by one public body to another for aid in carrying out the two sets of Acts, as the education authority will also be the vaccination authority.

In conclusion we have to congratulate the Imperial League and its honorary secretary, Mrs. Garrett Anderson, on the striking success of its deputation, and we may also express our pleasure at the fact that Dr. Bond, of Gloucester, was there to speak on behalf of the Jenner Society, and to indicate the cordial relations which exist between two organizations whose objects are essentially the same.

## THE PHYSIOLOGY OF DIGESTION.

DR. THOMPSON has rendered good service to the profession by translating Professor Pawlow's lectures on the physiology of digestion<sup>1</sup> into English. His work is well done, and we owe to him a readable account of investigations which are not unworthy to be compared with the inimitable researches of Claude Bernard. By careful asepsis and scrupulous regard for the conditions under which the animals are housed, Professor Pawlow has been able to keep thirty or forty dogs continuously under observation, and to make them the subjects of many series of experiments. He has succeeded in maintaining them alive for months after division of the vagi, with oesophageal, gastric, and pancreatic fistulae, and with a small accessible stomach-diverticulum cut off from the general gastric

<sup>1</sup> *The Work of the Digestive Glands.* By Professor J. P. Pawlow. Translated into English by W. H. Thompson, M.D., M.Ch., F.R.C.S. Eng. London: Charles Griffin and Co. 1902. (Demy 8vo, pp. 208. 6s.)

cavity; he has been thus enabled to study very carefully the action of the various organs concerned in digestion.

One of his most novel results is that different kinds of food may stimulate the appropriate ferment in the secretion of juice from the same gland; thus, for example, when an animal is fed on milk the fat-splitting ferment of the pancreas is abundantly present; when it is fed on bread the amylolytic ferment prevails, and when the dogs were fed continuously on one or other of these articles of diet the secretion of the pancreas appeared to be permanently altered so as to contain a larger proportion of the required ferment. No such change was observed in the gastric juice, but the question whether this could be induced by more prolonged dietetic conditions is left open.

If a dog with an oesophageal fistula is fed by the mouth none of the food reaches the stomach, but the effect is to stimulate a copious secretion of gastric juice, which may be obtained from such a dog, to use his own words, as milk is got from a cow. But if both vagi have been divided no secretion occurs until the peripheral end of the left vagus is stimulated by slow induction shocks, when a secretion of gastric juice invariably follows. In Professor Pawlow's opinion these experiments conclusively settle the controversy as to the innervation of the gastric glands. Similar experiments on stimulating the vagus demonstrate that it is not only the excito-secretory nerve of the pancreas, but possesses also an inhibitory power over this gland. "The secretion of saliva can be stimulated not merely by tempting the animal by offering it food, but by putting into its mouth anything that acts as a mechanical stimulus, such as sand; but the effect did not extend to the gastric glands even when such substances as bitters, pepper, and mustard were employed. On the other hand, the gastric glands may be excited by the idea of food, especially if the animal has been prepared by a fast of two or three days; of course the flow of gastric juice is not so great as when the animal is allowed to eat the food even if it escapes from the oesophageal fistula, as under these circumstances the effect of the sense of sight is aided by that of smell and taste. Professor Pawlow denies very explicitly the statement hitherto generally received that the gastric glands may be excited by mechanical means such as Beaumont used in his experiments upon St. Martin, where he speaks of collecting gastric juice by introducing an elastic tube 5 or 6 in. in length into the stomach and moving it up and down so as to increase the discharge. Professor Pawlow used a feather and a glass rod alternately, and states that not a drop of fluid escaped from the stomach after such stimulation, yet as soon as the sham feeding commenced the juice began to flow. He shows that it is possible to introduce food into the stomach of a sleeping dog without stimulating secretion. In his opinion, appetite is the great normal stimulus of gastric secretion; the truth of the old saying, "*l'appétit vient en mangeant*," is emphasized, and he suggests that it is probably from the absence of this psychic stimulus that neurasthenic and other nervous patients suffer from digestive failure. When hunger is present simple touching of the gastric mucous membrane may afford the impulse which excites the appetite, and in this way the flow of gastric juice, observed by Beaumont, may have been caused.

Water causes a moderate secretion of gastric juice, and many solutions (of sugar, salt, egg albumen) have no better effect. A solution of sodium bicarbonate had a distinct inhibitory influence; on the other hand, solution of Liebig's

extract, of gelatine and milk, appeared to be direct stimulants of gastric secretion. The ordinary practice of commencing a meal with soup is therefore sanctioned by these experiments, but it is right to recall that Schiff long ago came to the same conclusion.

Fat seems to have an inhibiting effect upon the secretion of gastric juice, and fat-containing fluids, such as milk, share this property. This action probably does not interfere with the digestion of milk when taken alone, but explains why, when used as a beverage with other food, it frequently causes digestive discomfort. The secretion of the pancreas seems to be stimulated by the presence of acids in the duodenum, and conversely to be controlled by the presence of alkalies; this is not only the effect of hydrochloric acid, but occurred with phosphoric, citric, lactic, and acetic acids; pepper, mustard, and similar substances produced no effect upon the flow, nor did a solution of sugar, peptone, or egg albumen, except in proportion to their acidity. Further experiments showed that so long as the acid remained in the stomach it did not affect the secretion of the pancreas and that this only followed the passage of the acid into the duodenum. The pancreas, like the stomach, is stimulated by psychical influences as was shown by offering food to fasting animals. These experiments prove the great importance of appetite for the normal fulfilment of digestion and give support to the view which, although generally admitted, is too often disregarded, that food to be digestible, should be well cooked and served so as to be agreeable. Bitters, *hors d'oeuvre*, and liqueurs served before meals may also serve a useful purpose in inciting appetite, but the practice of taking these preliminary stimuli is more esteemed in Russia than among ourselves.

Professor Pawlow suggests that the good effect of alkalies in catarrhal affections of the stomach is probably due to their inhibitory action upon the gastric glands, since the inflamed condition of the stomach causes an abnormal excitability or irritability of the secretory apparatus which gives rise to a superfluous and useless flow of gastric juice.

In a series of dogs which had well-marked hypersecretion of gastric juice excellent results followed from the use of a half per cent. solution of sodium bicarbonate. The hypersecretion diminished markedly and the greatly exalted excitability of the glands was fully and permanently abolished. If the effect of a glass of Vichy water be to restrain this excessive work it may contribute to the removal of the pathological condition and to restore the normal state. Other experiments show the value of drinking large quantities of water as a stimulus to the flow of gastric juice, which is necessarily diminished where the proportion of water in the blood is in any way lessened.

The old problem of the function of the bile is dealt with and the conclusion reached is that its chief duty is to facilitate the transition from gastric to intestinal digestion, to arrest the action of pepsin which is injurious to the ferments of the pancreatic juice, and to favour the ferments of the latter, in particular the fat-splitting ferment. The mechanism of the pylorus is dependent upon the reaction of the fluid in the duodenum; when this is acid the pylorus is closed, but when alkaline or neutral the pylorus opens, and as the neutralization of the duodenal contents is the work of the bile the regulation of the pylorus mechanism must be reckoned among its functions.

Professor Pawlow urges the utility of experimental therapeutics as a part of pharmacology; the experiments

to be conducted not upon human beings but upon dogs. He believes that if this could be done the distrust of pharmacology, which is, he recognizes, felt by many practical physicians, would be diminished, as it would then become not only a study of the general physiological action of remedies but of their curative influence in disease. We may quote with appreciation his concluding words: "It is only by an active interchange of opinion between the physiologist and the physician that the common goal of physiological science and of medical art will be quickly and surely reached."

## SPECULATIVE THOUGHT AND EXPERIMENTAL SCIENCE.

"IN the long run to construct a true method is a greater service to mankind than to discover items of knowledge." In these words Professor Clifford Allbutt gives the keynote to the Boyle Lecture on the Rise of the Experimental Method in Oxford, which he delivered to the Oxford University Junior Scientific Club.<sup>1</sup> He treats his subject from the historical standpoint, beginning with an outline of the early development of Oxford as a centre of learning; then follows a masterly exposition of the value for science of Roger Bacon's critical methods, and the concluding part of the essay is devoted to Robert Boyle, who paved the way for future research by his insistence on the importance of conducting experiments upon a systematic plan.

Professor Allbutt writes as the man of letters, displaying his wide knowledge of mediæval literature with a characteristic vigour of style and brilliance of epigram; he also exhibits the rarer and more valuable gift of interpreting successive epochs of intellectual growth and decadence according to their logical value for the evolution of a wider knowledge, and recognizes the corresponding advances and retrogressions of the physical sciences as the natural outcome of their general intellectual environment. It is owing to this power of insight into the influence of speculative thought upon experimental research that Professor Allbutt's views have an important bearing upon the scientific problems of the present day.

The further experimental science advances the more evident does it become that the unexplored field of future research is illimitable. To pursue fresh items of knowledge does indeed carry with it its own justification as a pursuit of truth; but the value of our acquisition varies in degree according to the intrinsic importance of the truths pursued. Scientific data gain their importance not as isolated facts but by their interrelationships and in their bearing on general principles. Data, true in themselves, may be valueless or actually misleading if correlated in an arbitrary or injudicious manner; hence the importance of our results depends on the wisdom of our method and the prescience of our working hypotheses.

The mere addition to the perplexities of accumulated facts may be of admonitory value in its emphasizing present impotence; it falls short of the higher scientific ideal of that knowledge which carries with it a fresh acquisition of power for the control of our environment. The work of the scientist, if it be honest, is not likely to be forgotten; but a finger post for future guidance is a more lasting memorial than a mausoleum of misdirected energy. The mind

of the true scientist is absorbed in the details of his particular experiments without being submerged in them; he retains his hold of the superior vantage ground which commands in its true perspective the landscape of scientific principle merging into the wider horizon of intellectual progress. No better illustration could be given of the advantage gained by this breadth of view than the passage in which Professor Allbutt describes the revival of Oxford learning after the decadence of the eighteenth century. ".....So Oxford slumbered on, to be awakened, not by the hum of the laboratory, but, as by Wycliffe three hundred years before, now anew by the thunders of Wesley, and the lightning of Newman, in St Mary's; St. Mary's the nurse of her infancy, the venerable mother of her prime. St. Mary's and modern physical science teach alike that between the material and the spiritual worlds there is no gulf; that in the death of either the other is also dead; and that in the life of each is their consummation."

It is from thoughts such as these that science receives its most potent stimulus, because they are stamped with the profound conviction that the mainsprings of thought, the fountain-head alike of speculative theory and experimental research, have a common origin and are vitalized by a common enthusiasm.

Moreover, they raise a most interesting topic—the influence of the sister universities on modern sciences. Happily both Oxford and Cambridge are rapidly growing out of the narrow spirit of pedantry which regards their schools of experimental science as a mere excrescence on their academical lore, with no higher destiny than that of a possible encumbrance, and, still more fortunately, the scientist, too, is ceasing to despise the knowledge not born of the laboratory as speculative dreaming or literary verbiage. It is now admitted as a scientific truism that the direct influence of mind on mind is powerful and subtle; and this is true, not only of the interaction between individual minds, but also of the influence exerted upon the individual by the collective intellect of his university. It is to the richness of their heritage of learning that Oxford and Cambridge owe their unique position. Secure in their continuity as the parent source of our national intellect, self-gathered the knowledge of their power and the consciousness that their destiny knows no end, they exert an influence not communicable by words or to be stored in books; it must be directly inhaled by living in the atmosphere of the place, for the influence of mind on mind is an inspiration, and not the imposition of a dogma. We know well enough what university life has done to mould men of letters, lawyers, and statesmen, and we are accustomed to recognize their achievements as springing from a common parentage on the banks of the Cam or Isis. May we not hope that this same influence will be extended more and more into the domain of experimental science, and, in particular, will make itself felt with ever-increasing insistence in that science which, though still in its infancy, is paramount in importance, the science of the human body in health and disease?

## THE INDUSTRIAL ACCIDENTS COMMITTEE AND CERTIFYING SURGEONS.

CERTIFYING surgeons will read with mixed feelings the recommendations made in the report of the Industrial Accidents Committee with reference to investigation of certain well-

<sup>1</sup>*Journal of the Oxford University Junior Scientific Club.* London, Edinburgh, Glasgow, and New York: Henry Frowde. 1s. net.

defined classes of "factory" accidents. It is gratifying to find the surgeon's ability to throw light on the causation of accidents duly recognized, though perhaps such recognition might have been more complete. It is as much within the province of the surgeon to define the exact causation of an accident as it is for him to describe the nature of the injury resulting, and reliable information cannot be obtained under this head without the special knowledge afforded by his professional training. It is useless to attempt to devise preventive measures unless the causation can be accurately determined, and to render statistics reliable every case must be properly investigated. The surgeon's knowledge of the nature of an injury, and the means by which alone a particular injury could be inflicted, often enables him to state with exactness the true causation when stories differ, or in cases of instant death or sudden unconsciousness when no witnesses are present. The investigation by the certifying surgeon is therefore not only valuable, it is a necessity. There should, however, be no slipshod work, and those surgeons, if such there be, who think that the copying out of the employer's notification fulfils all requirements should recognize that this perfunctory course is damaging to the reputation of the whole body of certifying surgeons. The causation should be stated in so clear a manner that the inspector shall be able to judge of the necessity or otherwise of visiting the works for the purpose of securing efficient guards. The report rightly lays considerable stress upon this. We are glad to know that many accurate reports are made at present to a greater extent than the Committee were perhaps made aware of, and that the slipshod style is luckily not universally adopted by certifying surgeons. The wretched scale of payments which has up to the present been regarded by the Home Office as an adequate equivalent for the services rendered has long been a sore point with certifying surgeons, and it is satisfactory to find the Committee recommending an increased fee. The classes of accidents requiring investigation by the surgeon are and always have been defined by statute, and, in face of the failure of the attempt made in the last Factory Bill to empower the Home Secretary to fix by order what should be handed over to the certifying surgeon for report, it is somewhat astonishing that the same idea of fixing this officer's duties by order, instead of by Act of Parliament, should reappear. It is recommended that the inspector should refer to the certifying surgeon only such accidents as come within the scope of certain regulations to be made (presumably by the Home Office) for his guidance. On the former occasion it was satisfactorily shown to a large number of members of Parliament that the only systematic investigation was that made by the surgeon, who not only visits the works, but the injured person as well, and that, except in fatal cases, the local inspector rarely makes inquiries at the factory. If the statistics are to be kept up to the existing standard, every preventable case must be looked into by the factory surgeon. The report expresses the view that the duty of the surgeon consists in determining the extent of injury, and, as many injuries are but trivial, that there is no need for a report in such cases. This is a very serious confusion of cause and effect. It is an established fact that the degree of injury is no indication *per se* of the nature of the causation. A form of accident causing the most frightful injuries is brought about by being caught by machinery shafting, yet such an accident has been known to have resulted in nothing worse than contusions. The precautions taken, as the result of the surgeon's investigation, in the case of the slight injury might easily prove the means of saving a subsequent fatal catastrophe. It is also well known that the investigation by the surgeon of a slight accident has resulted in the discovery of an unfenced machine, which thus receives attention probably months earlier than would be the case if the only chance of attention being called to it were at the annual visit of the inspector. As no investigation by the certifying surgeon means practically no investigation at all, it is to be hoped that Parliament in its wisdom will refuse to adopt this resuscitated recommendation.

## THE ARMY MEDICAL SCHOOL AND THE MEDICAL STAFF COLLEGE.

THE report of another prize distribution at Netley will probably excite some surprise. The distribution by Earl Roberts in July last was declared to be the closing ceremony of the Army Medical School, Netley; and so it was, for the Medical Staff College, which has taken its place, has held its first session in the laboratories of the Royal Colleges on the Thames Embankment, which has been temporarily hired for that purpose. The course of instruction carried out in these premises during the months of September and October included the subjects of hospital administration, military hygiene, and pathology, the latter two including laboratory work. Practical instruction was also given in the examination of recruits. Work which used to be spread over four months was compressed into two. Several important subjects which used to be taught at Netley were omitted from this course, and the practical initiation into the methods of management of military hospitals and generally into the life and work of a medical officer in the army had still to be undergone. For these purposes no suitable arrangements existed, or could be provided in or near London. Accordingly the officers belonging to the Royal Army Medical Corps were sent to Aldershot at the conclusion of the London course in order to obtain instruction and training in the more practical and technical parts of their business as army surgeons, while those belonging to the Indian Medical Service proceeded to Netley, where arrangements and means still existed for giving instruction in military surgery, tropical diseases, skiagraphy, and lunacy, and inculcating the habits and ways of military medical life and service. Hospital arrangements and customs in the native army of India are simpler than in the British army, but they necessarily follow similar lines, and as time goes on these lines will converge. On service there is often an interchange of duties between the two medical establishments, and any Indian medical officer may have to serve in or supervise the hospitals of British troops. For these reasons the association of officers of the Royal Army Medical Corps and Indian Medical Service in instruction and in hospital work at the commencement of their careers is sound and useful, while the sense of fellowship and community thus engendered is calculated to produce excellent results in India, where they will often be associated in life and work. When the new military hospital and its adjuncts have been built and equipped in London—and the sooner the better—these salutary arrangements will be more thoroughly accomplished. Meantime, it has been wisely determined to hold by the present means and opportunities of teaching and training still available at Netley until similar or better have been established elsewhere.

## BABY-FARMING.

ATTENTION has been called on many occasions in these columns to the inadequacy of the Infant Life Protection Act to prevent the abuses that exist under the present baby-farming system. The case that was dealt with at the Middlesex Sessions last week proves that the Act and its administration are quite impotent to effect the object that was intended. The case was as follows: A man, his wife, and daughter were charged at the Middlesex Sessions with grossly neglecting nine children entrusted to them. They had received with each of the children sums varying from £10 to £30. Two of the infants, miserably clothed, were packed into the lid of an old rush basket. All the children looked in a most wretched condition, and were evidently suffering from insufficiency of food. All the prisoners were found guilty, and Sir Ralph Littler, taking a common-sense view of the case, "made the punishment fit the crime by sentencing each of them to three years' imprisonment." The present Act provides that where upwards of £20 is paid the child shall be exempt from inspection. It is to be hoped that the present case will convince those who have opposed the extension of the Act to all cases of the absolute necessity

that exists for the revision of the Act if it is not to remain a dead letter. At present these unfortunate children are in a far worse position than the destitute children under the care of the State. "To cure is the voice of the past, to prevent the divine whisper to-day," and the first thing that ought to be done is to require every one of these places, whether one or more children are kept, to be licensed, to keep a record of the name and residence of the parent, and to at once give information to the authorities of the removal of themselves or the child. We should be prepared to go even further than this, and compel all people receiving women to be confined for gain to be licensed. The British Medical Association suggested that a clause requiring all lying-in homes to be licensed should be introduced into the Midwives Bill, but Parliament did not find time to deal with the proposal, although it met with no serious opposition. We shall no doubt be met, with the old cry that such drastic legislation would lead to an increase in the number of infanticides; we believe that the reverse would be the case, and we are strengthened in this opinion by the results of the administration of the Roussel law, which, according to Dr. Drouineau, has very greatly diminished the number of cases of infanticide in France. If the Act is to be properly administered we must have women inspectors, not only to see that the children are not wilfully abused, but also that they do not suffer from the ignorance and carelessness of the nurses. In what ignorance and carelessness may result is shown by the fact that of 2,500 children who died in Paris last year from gastro-enteritis no fewer than 2,000 were bottle-fed.

#### THE LONDON HOSPITAL.

UNDETERRED by the intention of the authorities of St. Bartholomew's Hospital to appeal through the Mansion House for the sum of £300,000, the governing body of the London Hospital issued its quinquennial appeal on Tuesday last. It is signed by the Hon. Sydney Holland, Chairman, and is a forcible and even picturesque document. He states that last year 13,160 persons were treated in the wards, and 162,147 separate persons in the out-patient department. Borrowing a method, which to judge from some of the monthly magazines has recently become popular, he endeavours to impress the magnitude of these figures upon the public mind by asserting that the hospital during the 365 days of last year treated 66½ miles of human beings standing side by side; for the treatment of these miles of human beings 92 miles of lint and 476 miles of bandages and 9 miles of plaster were used, and the in-patients ate 6½ miles of eggs; the patients also swallowed, or were told to swallow, 2½ millions of pills, and 3 tons of cough lozenges. Mr. Holland asserts that the London Hospital is placed just where it is wanted, which no one will be disposed to dispute, and implies that the whole 66½ miles of human beings were suitable subjects for charitable treatment. We hope so; but we must confess that the figures are not convincing in the absence of any assurance that no means are taken to sift out from the total of applicants those—and there surely must be some—for whom medical attendance could be properly provided by a development of the system of provident dispensaries if not by the general medical practitioners of the district, which the London Hospital seeks to serve. The hospital has an income from invested and trust funds of £22,000 a year, but spends £85,000 a year, yet in spite of the financial difficulties under which it is conducted, it has, since the last wide appeal made to the public five years ago, erected an isolation block at a cost of £32,000, the gift of an anonymous donor; built five operating theatres at a cost of £13,000, the gift of another anonymous donor; it has built, at a cost of £20,000, a large pathological department which Mr. C. Morrison has endowed for three years, and has erected a new out-patient department at a cost of £70,000, while a convalescent home has been built by the executors of the late Baroness de Stern, and Mr. Hora has endowed a women's ward which is to be built. It would be a misfortune if the London Hospital were to be deprived of public support, but we venture to hope that the Chair-

man's zeal will not lead him to encourage further proposals for adding to the number of beds in the hospital, or increasing its out-patient department. If further beds and more out-patient accommodation are required in the East End of London—a point which we think requires to be proved—we venture to submit that the need will not best be met by adding to the furlongs of wards and the miles of patients now treated by the London Hospital. London is spreading, and more and more square miles are becoming covered with houses inhabited by persons many of whom belong to the same class as through the London Hospital. Organizations for medical aid should follow the same tendency towards the periphery, and we could wish that there was some authority which could determine whether the extension of existing hospitals, and when and where the institution of new medical charities were required. No body with such powers exists, but we may hope that the executive of the King Edward's Hospital Fund may be able in time to exert its influence in this direction.

#### THE PRINCIPAL OF THE UNIVERSITY OF EDINBURGH.

THERE are endless rumours as to who is to be the new Principal of the University of Edinburgh. The mystery or privacy of the negotiations leads to this in part. So also does the mode of procedure. The Curators of Patronage meet and talk over the persons they think worthy of consideration for the vacant office, but the vacancy is not advertised. Possible candidates are not invited to make applications. The general belief is that, if he is not actually to be the next Principal, Sir William Turner will at least have the refusal of the office. There have been difficulties in the way, but it is generally believed that these have been adjusted. After a full term of office the retiring allowance to the Principal would be £600. The retiring allowance of the present Professor of Anatomy would be £1,341 6s. 8d. It is now understood that his years of service in the latter will be allowed to count in calculating the pension of the Principalship. The latest gossip in Edinburgh is that, if appointed Principal, Sir William Turner will also continue to hold the Chair of Anatomy as well as the office of President of the General Medical Council. These conjoint tasks might well seem beyond the strength of a man of 70 years. Anyhow, it is a matter of history that although the late Sir Alexander Grant wished to give advanced lectures in philosophy (a task for which he was highly qualified, and a task which would have been so congenial to him) while he held the Principalship, the lectures were never given. If Sir William Turner, then, is offered and accepts the Principalship it is believed that he will *ipso facto* cease to be Professor of Anatomy. While some would have wished to see a somewhat younger Principal, it will be admitted that no one has done more to advance the material and financial interests of the University than Sir William Turner, and he well deserves, if he so wishes, to crown an honourable career by becoming the head of the University he has served so well.

#### TENT LIFE FOR THE TUBERCULOUS INSANE.

DR. A. E. MACDONALD, Superintendent of the Manhattan State Hospital, East Ward's Island, New York City, has, we learn from the New York *Medical Record*, introduced at that large institution a system of tent care of the insane which, according to Dr. C. Floyd Haviland, one of the assistant physicians, has been attended with the most gratifying results during the years it has been in operation. On June 5th, 1901, 40 phthisical patients began a residence in tents. In this number were included all cases of both military tuberculosis and phthisis at that time in the hospital. Two large tents were employed, each being 14 ft. high and having a capacity of 20 beds, allowing 40 square ft. of floor space per bed. These tents were erected upon elevated, dry ground, where they were surrounded by abundant shade, and were constantly swept by breezes from the river. The ground was cleared of all vegetation beneath each tent, and a board floor constructed about 18 in. above the ground, which, being made



in sections, could be taken up and exposed to direct sunlight as occasion demanded. In pleasant weather one side of the tent was kept open, so that the interior was literally flooded with pure air, and at all times sufficient ventilation was afforded by large ventilators at either end placed near the top of the tent. Near at hand were erected several small auxiliary tents, which included two dining tents, a clothing tent, and those for the residence of the attendants. Facilities for bathing were provided, and a separate water supply was established, while the sanitary arrangements generally and personal cleanliness of the patients were closely looked after. During the year 81 patients were given the benefit of tent life, and in that period of time 19 deaths occurred among them, a percentage of 23.45 out of the total number of cases treated. On the other hand, when all the deaths occurring in the hospital during the past year are taken into account, these figures make the percentage of those succumbing to tuberculosis as low as 8.8. The real benefit of the tent system is shown by a comparison of this percentage with that recorded in former years in the Manhattan State Hospital. Ten years ago they formed 17.8 per cent. of the total number of deaths, but with increasing care the proportion steadily decreased during the succeeding years, so that the yearly average has been 14.1 per cent. during that time. One year ago 9.8 per cent. of the deaths resulted from tuberculosis, but under the tent system the percentage of 8.8 is established, which is the lowest in the history of the institution. Isolation is acknowledged to be the most effective safeguard against spreading the disease in any public institution. In asylums for the insane there is greater need to prevent infection than in ordinary institutions, on account of the dirty personal habits of the demented. It is therefore especially necessary to isolate the tuberculous insane.

#### A NEW HOME FOR CONSUMPTIVES IN PHILADELPHIA.

ONE of the signs of the times seems to be a competition among millionaires in lavish giving for philanthropic purposes. An American millionaire, Mr. Henry Phipps, the "steel magnate" who gave £20,000 for the relief of the Boers, has, if we may be allowed the expression, gone £100,000 better than Sir Edward Cassel by founding in Philadelphia a home for the treatment of consumptives at a cost of £300,000. As provision is made for the use of the Finsen treatment in the new home, it may perhaps be inferred that the benefits of the institution will not be confined to consumptives, but will be extended to sufferers from other forms of tuberculosis.

#### THE PLEA OF INSANITY.

THE plea of insanity is frequently urged as a last resort in answer to criminal charges of a serious nature. So successful has this plea been of late in Scotland, that in a recent case Lord Stormonth Darling took occasion to state his view of the law upon the subject. It appears that a man was charged with the murder of his wife, and a plea was urged that he was insane at the time when he committed the act. Medical witnesses called for the prosecution stated that when the prisoner was examined by them he was quite sane. No medical men were called for the defence, the plea of insanity being based upon the fact that the prisoner, who had recently returned from South Africa, had been much disturbed upon his arrival in England by hearing that his wife had been unfaithful in his absence. Evidence was also tendered to show that he had been guilty of strange conduct about the time when the murder took place. In charging the jury, Lord Stormonth Darling said: "The defence that a prisoner is mentally sane enough to be criminally responsible, but is nevertheless in such a state of mind as to reduce the criminality of his act from murder to culpable homicide, is admitted by the law, but must be accepted with extreme caution. The evidence must amount to this: that there has been a process of deterioration going on in the prisoner's mind which

amounted for the time to brain disease. If the evidence justifies you in holding that the accuser had so brooded over his wife's conduct that, apart altogether from the effects of drink or jealousy, his mind became so morbidly affected that he was no longer fully responsible for his actions, in that case it is within your province to return a verdict of guilty of culpable homicide." In the result the jury found the accused guilty of murder, with a unanimous recommendation to mercy. He has since been reprieved. It is in the best interests of justice that the perpetrator of a *crime passionelle* should be treated by a jury as if he had been actuated by more sordid motives. A recommendation to mercy is quite sufficient, in all genuine cases, to secure the exercise of the prerogative of mercy. The defence of insanity is not often set up in courts of justice, except in cases which involve the penalty of death; the reason being that a lunatic is deemed to be incapable of that "malice aforethought" which forms an integral part of the crime of murder. But it is difficult to see how a weakminded person can have the "felonious intention" which is also an integral part of many lesser crimes. In another case which recently came before the Sheriff Court of Edinburgh, a young man of good family was tried and convicted for the second time on a charge of committing frauds on jewellers. When brought up for sentence it was stated that the prisoner was subject to a mental derangement which had caused him to be placed in a private asylum when very young. He had no lack of means, and the frauds were perpetrated to gratify a mere passing whim, and with an absolute want of any precaution to prevent their being found out. Two eminent specialists said that although they could not certify that the prisoner was insane, he exhibited distinct traces of mental weakness. The sheriff, in sentencing the prisoner to nine months hard labour, observed that nine-tenths of the prisoners tried were of weak mind.

#### THE EXTERMINATION OF THE MOSQUITO IN SIERRA LEONE.

THE Honorary Secretary of the Liverpool School of Tropical Medicine has received from Dr. Logan Taylor, the leader of the Sierra Leone Expedition sent out by the school, a letter giving an account of the progress of the expedition. He states that he is getting a report ready for the school about the Sierra Leone work, which will shortly be sent. They had to stop most of the men at the end of August, only keeping the oiling gang after that. Dr. Logan Taylor is well pleased with the work this gang has been doing during his absence, as when he went round to inspect their work he found, both in untouched and drained streets, a very noticeable absence of *Anopheles* larvae in places where they used to be able to get any number. This is due to their not being able to breed, owing to the pools being either swept out or oiled regularly. The result of this is that, compared with the corresponding time last year, in some of the notoriously bad streets, where in a single house they could find as many as six, seven, or a dozen *Anopheles* mosquitoes in the early morning, this year, with great difficulty, after searching house after house, they could get one, or perhaps two, adult insects. He intends to keep on an oiling gang until the end of February, by which time he should be free of the Gold Coast; he is leaving eleven men to peg away at Grassfields district until he returns to Freetown. An extra £500 has been put down in next year's estimates for continuing drainage work. The engineers are working at the hill railway, and also at the new waterworks. Since the men of the expedition stopped clearing up yards and emptying out the water containing *Culex* larvae, no one else has taken up the work, and these insects are getting bad again. Dr. Logan Taylor goes on to say: "In fact, the rubbish is beginning to accumulate in the yards as before, and several of the Europeans were complaining to me of being much annoyed by *Culex* and *Stegomyia*. This means that unless the Government and the school will keep on the work, the money the school has spent on it will be almost thrown away. My destination now is Cape Coast, where I am to

go and take charge of the sanitary work of the town, and see that my former recommendations are carried out. The people of Accra have been very kind, and the principal medical officer and the medical department are doing everything to assist me."

#### PERTH HOSPITAL, WESTERN AUSTRALIA.

In the *Daily News*, Perth, West Australia, for December 3rd, 1902, is published a full report of an attack made in the Legislative Assembly upon the present management of the Perth Hospital. The hospital seems to have been started in 1897, and the chief complaints appear to be (1) that the same staff has been re-elected, with few exceptions, since that year; (2) that these gentlemen are, for the most part, members of the Board of Management, who elect themselves or their partners; and (3) that such outsiders as have been admitted are comparatively junior men. In our opinion it is absolutely essential for the good management of a hospital that there should not be frequent changes in the staff, and we think that the plan of an annual re-election is very bad. We should suggest that the medical officers should be elected for a term of years, and for that time should not be removable, except for grave causes. It is only natural that those who took part in the foundation of the hospital should have seats upon the Board, and should exercise a considerable amount of influence over medical appointments, and we cannot agree with the proposal of the speaker that in the future no practising medical man should be allowed to have a seat upon the Board. We also feel that there is no legitimate ground for complaint in the fact that when vacancies have occurred these have been filled by the appointment of comparatively junior men, for a hospital staff composed wholly of seniors might prove unworkable. The critic put his finger upon a more serious defect in the management of the institution when he pointed out that the lay members of the Committee, who number sixteen, and whose proportion to the medical members is as sixteen to five, attend very irregularly. In the management of a hospital the presence of an active business element is essential. We hope our friends in Western Australia will seek to strengthen the hospital by enlisting the services of public men of all sorts, and encourage them to take an interest in the work. It is an advantage to have all classes represented, and the value of the co-operation of ladies and of working men should not be overlooked.

#### THE PROPHYLACTIC VALUE OF ANTIDIPHThERIA SERUM.

WITH the object of obtaining the materials for a definitive judgement as to the prophylactic efficacy of antidiphtheria serum a collective investigation is about to be undertaken in Germany. For this purpose a circular has been sent to all medical practitioners in the German Empire asking for answers to the following questions: (1) Have you used antidiphtheria serum for prophylactic purposes? (2) How often (a) in families (a short account of the conditions is desirable); (b) in schools and similar communities (orphanages, homes for widows, holiday colonies, etc.); (c) in hospitals? (3) How many individuals in all were inoculated (a) under the age of 12, (b) over that age? (4) Were all the exposed persons inoculated? (5) How many were not? (6) Were the inoculated persons isolated from those suffering from diphtheria? (7) What serum was used? (8) With how many units of immunity? (9) How many of the inoculated persons contracted the disease? (10) Within what space of time from the inoculation did the disease begin? (11) Did cases of diphtheria occur at the same time in exposed persons who had not been inoculated? (12) Have you ever noted any disturbance of health after the inoculation? (13) Have you repeated the inoculation in the same persons—(a) at what interval of time; (b) in how many cases? (14) Are you, on the basis of your personal experience, convinced of the utility of the protective inoculation of antidiphtheria serum? The results of the investigation will be laid before the International

Congress of Hygiene and Demography, which is to meet in Brussels in September next. A similar investigation is also to be made in other countries.

#### THE VACCINATION AUTHORITY.

ON the invitation of the Medical Officer of Health for the County Borough of Wigan, Dr. William Berry, a large number of the medical men of Wigan and district met in conference on January 6th. Dr. Berry, who occupied the chair, in referring to the epidemic of small-pox in the town, remarked that he knew whatever might be said to the contrary, they, the medical men of Wigan, rendered unselfish and unrewarded aid in regard to its public health. Base motives had been insinuated by certain members of the public, for example that the main object of their notification of infectious cases was to obtain the small fee attached, and that a similar reason applied to vaccination. No greater calumny had ever been hurled at a noble profession. The first cases of small-pox of the present epidemic had been discovered in a lodging-house during a careful supervision systematically carried out, and the two cases were removed to hospital while in an early stage, together with two persons who had been in contact with them. The public vaccinator at once revaccinated the remaining occupants of the lodging-house with the exception of four; one of these was found next day to have the disease and was removed to hospital; another was suffering from scabies (he was eventually isolated); and two others refused because they considered themselves too old. One of these, aged 68, was the father and grandfather of one of the patients, and on the ninth day after the discovery of the first cases he was found to have the disease. In view of the moral certainty that the disease must have been brought into the town by frequenters of tramp-wards and lodging-houses, he had considered it his duty to write to the Wigan Board of Guardians asking for facilities for the revaccination of such persons, advising that all officers who came in contact with them should be revaccinated, and especially that those tramps who were sent to lodging-houses owing to want of accommodation in the wards should be compelled to be revaccinated before they gave them a night's lodging. The letter met with a very unfavourable reception. He had long held the opinion, which had been confirmed by the reception of his letter, that the proper authority for the carrying out of the Vaccinations Acts was the sanitary authority, and in any future Bill dealing with the subject he trusted that such a provision would be made; for if so, in ten years after such provision small-pox would be practically extinct in this country. Reference was made also to other matters relating to the prevention of infectious disease, including the voluntary notification of measles and the desirability of notifying whooping-cough. These and other cognate matters were carefully discussed by a number of the medical men present, and by two aldermen of the Wigan Corporation.

#### THE DISPOSAL OF SEWAGE IN RURAL DISTRICTS.

AMONG the subjects discussed at the recent conference of the Gloucestershire Poor-law and Rural District Councils Association held at Gloucester were the establishment of labour colonies as a solution of the rural vagrancy question, and the education of the children of gipsies. Dr. J. M. Martin, Medical Officer of Health of the Stroud Rural District Council, read a paper on the disposal of sewage which furnished the conference with a most suitable account of the present position of the subject, and more particularly of its application in rural districts. After sketching the history of sewage treatment from the time of the Romans, Dr. Martin dealt with the best methods for (a) the isolated house, and (b) for towns having the water-carriage system. For the former Dr. Vivian Poore's well-known method was recommended, the lecturer advising "an earth closet of small capacity so that no accumulation can take place, and the burying of the contents superficially in the garden, slop water being distributed on the surface of the garden (preferably among shrubs). Thus by dispos-

ing of the refuse in the surface soil the ground will be improved for agricultural purposes, and there will be no accumulation of filth to pollute water supplies. For the latter, the water-carriage system, Dr. Martin discussed broad irrigation, intermittent irrigation, Liernur's system, chemical treatment, and bacterial treatment. It was contended that the last named was in principle the same as that recommended for the isolated house, and was in fact "a natural method under control." Whatever method it was intended to adopt, thoroughness of application and competency of scheme were matters of importance. The bacterial method, for example, if mismanaged, would create a greater nuisance than it was designed to remove. Disposal works, to be successful, should include means for temporarily retaining and dissolving suspended matter, bacteria beds, provision for storm water, and such arrangements as would reduce the liabilities to derangement by frost or snow to a minimum. Dr. Martin referred incidentally to the requirement of the Local Government Board as to the provision of land for further treatment of sewage effluents which had recently been modified and to the importance of the effluents being free from putrescible matter, which it was now quite feasible to obtain by the bacterial treatment properly managed. From our knowledge of rural district councils, we think such papers as Dr. Martin's are to be greatly commended as educational factors. No one would suggest that they should be anything more than elementary and of an explanatory nature, for if more than this they would pass over the heads of a lay audience and only create confusion. Dr. Martin's paper was an excellent example of the wise diffusion of information to persons, who as district councillors have an influence in relation to public health work. Dr. Martin was able to announce that a septic-tank plant is now being laid down by the Stroud Rural District Council, and is nearly ready for use.

#### THE KING EDWARD VII SANATORIUM, GUERNSEY.

THE ceremony at the Castel, Guernsey, of opening a new Hospital for Infectious Diseases was attended by His Excellency the Lieutenant-Governor (General H. M. Seward), Mr. H. A. Giffard, Bailiff of Guernsey, the Jurats of the Royal Courts and representatives of the medical profession. The hospital is built on the same hill, 200 ft. above the sea, on which the present wood and corrugated iron isolation building belonging to Castel Hospital now stands. Two pavilions have been erected each having accommodation for both sexes. One of these is for diphtheria cases, and will accommodate twelve patients. The other block is for typhoid patients and "observation" cases. The old iron and wood building will be reserved for scarlet fever cases, and space has been reserved for building another pavilion when necessary. There is an administrative block, with accommodation for the matron, nurses and servants, a laundry and discharge block; efficient disinfecting arrangements and stables for the ambulance and disinfecter van and the necessary horses complete the scheme. Mr. Giffard, in declaring the hospital open, suggested that it should be called the King Edward VII Sanatorium. Jurat Ozanne, in proposing a vote of thanks to Mr. Giffard and to the Lieutenant-Governor, asked permission of the Bailiff and of His Excellency to allow the committee to name one block the Giffard Pavilion and the other the Seward Pavilion. The company before dispersing inspected the various wards, several of which are ready for the reception of patients.

#### A CAMPAIGN FOR THE SUPPRESSION OF TYPHOID IN GERMANY.

THE *Berliner klinische Wochenschrift* states that in the estimates for the Imperial Home Office for the coming year provision is made for the establishment of "typhoid stations," at first in the Rhine Provinces and the adjacent Imperial Prussian territories. In these stations a systematic effort in accordance with Professor Koch's recent researches to which reference was made in the BRITISH MEDICAL

JOURNAL of January 10th, will be made under the supervision of the Imperial Health Bureau and the Imperial Sanitary Council, for the stamping out of typhoid fever in its endemic foci. For this purpose a sum of £7,500 is allocated. Provision is also made for an addition to the buildings of the Bacteriological Laboratory for the purpose of researches on protozoa. Other items in the estimates relate to the collection of statistics of sickness and mortality, and to investigation of the ultimate results of the sanatorium treatment of tuberculosis.

#### MEDICINE AND LAW AS PROFESSIONS IN GERMANY.

OF 5,617 pupils of the gymnasia and "modern side" gymnasia in Germany who passed the leaving examination in 1901, only 525, or 9.35 per cent., chose medicine as a profession, whilst 1,310, or 23.3 per cent., entered at the various universities as students of law. These figures seem to show that in Germany at least the public is beginning to realize that the medical profession under existing conditions does not offer a very attractive career.

THE University of Dorpat, or as it is now called in Russia, Jurjev, celebrated the hundredth anniversary of its foundation on December 25th and 26th.

PROFESSOR EHLERS of Copenhagen, will, we understand, accompany a commission sent out by the Danish Government to study and report on the Danish West Indies from various points of view. He will investigate the diseases prevalent in the islands.

THE residuary estate of the late Mr. Frederick James Quick, of Eltham and Trinity Hall, Cambridge, which will probably amount to between £50,000 and £60,000, has been bequeathed to the University of Cambridge, in trust, to supply the income in the promotion of study and research in animal and vegetable biology.

THE German Cancer Research Committee has addressed to the medical practitioners of the districts in which the occurrence of cancer seemed to be most frequent questions which, it is hoped, will supply important statistical material. A Spanish Cancer Research Committee has also collected a considerable amount of material which will shortly be published.

It is proposed to erect in Munich a memorial to the late Professor Pettenkofer, who died in February last. A large and influential Committee has been formed in Germany, and the Bürgermeister of Munich has, through Professor W. H. Corfield, formally invited the co-operation of sanitarists in this country. A provisional Committee has been formed with Dr. Christopher Childs as Honorary Secretary.

It is announced that the sum of £10,000 has been vested in trustees by Mr. T. Sutton Timmis, J.P., for the purpose of systematic investigations into the origin and cure of cancer, which it is intended shall be carried out in the Liverpool Royal Infirmary and the new laboratories of experimental medicine in the University College, Liverpool.

ON January 9th Professor von Esmarch celebrated his 80th birthday. His numerous admirers and friends, with Prince Henry of Prussia at their head, have taken advantage of the auspicious occasion to erect a memorial of the venerable surgeon in his native place, Tönning, in Schleswig-Holstein. To the congratulations of the whole medical profession of Germany we venture to add the expression of a hope that Professor von Esmarch may long be spared to enjoy the best fruit of length of days—the happy memory of a life devoted to the furtherance of knowledge and the relief of suffering.